REMARKS

The Office Action mailed September 15, 2009 has been carefully considered and the following response prepared. Claims 4, 5, 7, 10-12, and 21-37 are pending in the application.

Claim 21 has been amended to state that the method selectively protects useful plants selected from the group consisting of corn, cereals, rice, cotton and soybeans against phytotoxic side effects of one or more herbicides, without substantially reducing the herbicidal activity on weeds. Support for the amendment to claim 21 can be found throughout the specification, in particular, at page 27, lines 13-16, the paragraph beginning at page 27, line 26 continuing through page 28, line 6, and page 29, lines 8-9. No new matter has been added.

REJECTION UNDER 35 USC 103

At page 4 of the Office Action, the Examiner rejected claims 4, 5, 7, 10-12, 21-25 and 27-37 under 35 USC 103 as *prima facie* obvious over Senaratna et al., WO 99/25191, in view of Smutny et al, U.S. Patent 3,101,265 and D'Halluin, U.S. Patent 6,140,553. The Examiner alleged that it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Senaratna et al., Smutny et al., and D'Halluin in a method for protecting cereal, corn, cotton, or soybean crops against the phytotoxic effects of agrochemicals using the compound of formula I.

Applicants traverse this rejection.

Amended claim 21 is directed to a method for selectively protecting useful plants selected from the group consisting of corn, cereals, rice, cotton and soybeans against phytotoxic side effects of one or more herbicides, without substantially reducing the herbicidal activity on weeds, which comprises applying, as safeners, an effective amount of one or more compounds of the formula (I), as recited in the claim, or salts thereof, before, after or simultaneously with the herbicide or herbicides to the plants, parts of plants, plant seeds or propagation material. Claims 4, 5, 7, 10-12, 22-25 and 27-37 depend directly or indirectly from claim 21.

A *prima facie* case of obviousness requires the following: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; (2) there must be a reasonable expectation of success; and (3) the prior art reference (or references when combined) must teach or suggest all the claim limitations.

Senaratna et al. discloses the use of benzoic acid and functional derivatives thereof for inducing stress tolerance in plant material. The compounds of Formula I in Senaratna et al., representing the benzoic acid derivatives, may generally be substituted at the phenyl ring by one or more substituents. Any of the values given for R_1-R_5 can be present at any of the five positions around the phenyl ring. While some of the compounds of Formula I according to the present invention fall within the general formula of Senaratna et al., the substitution pattern of the phenyl ring is not found in the specific examples of Senaratna et al., which disclose only benzoic acid, salicylic acid, 5-sulfosalicylic acid, and acetylsalicylic acid, which compounds themselves do not fall within the scope of the compounds of Formula I as recited in claim 21.

As is evident from the previously filed declaration of Dr. Bickers, and the examples in the present specification, the compounds of formula I, as defined in claim 21, are preferred safener compounds, and, in addition to the effect of protecting important useful plants against phytotoxic effects of an agrochemical, they do not reduce or do not substantially reduce the effect of the agrochemicals on undesired organisms (such as weed plants) in the useful crop.

Applicants submit that the desired safener effects of the compounds of formula I of the present application were not disclosed or rendered obvious by Senaratna et al. Senaratna et al. shows examples of compounds not within the scope of the present claims, which have the effect of reducing phytotoxicity of paraquat and other compounds on certain crop plants (tomato and beans). Senaratna et al., however, fails to teach whether the safener effect is substantially selective to the crop; i.e., whether or not weeds are also safened by the test compound. The tests of Senaratna et al. are mainly designed to determine the effect of the test compound on the crop plants alone. There is no disclosure or suggestion of the effect of the test compound on weeds. Applicants therefore submit that Senaratna et al. fails to teach the present invention. The

safening action of the compounds of formula I of the present invention is selective. The compounds reduce the harmful effect of herbicides on useful crop plants, but do not substantially reduce the herbicidal effects on important weed plants.

Contrary to the examples in Senaratna et al., the claimed methods of protecting useful plants or crop plants work without a substantial inducing period. As shown in the biological examples B1.1 and B1.2 of the specification of the present application and the declaration of Dr. Bickers, the herbicides and safeners were applied simultaneously on the soil or emerged plants. As can be concluded from the examples in the specification and the declaration of Dr. Bickers, the safeners according to the invention apparently do not need an inducing period. Therefore, the mode of action of the safeners is different from the mode of action of the benzoic acid or salicylic acid used in the examples of Senaratna et al. The compounds of formula I of the present invention thus have different properties in comparison with the exemplified compounds taught by Senaratna et al.

Smutny et al. and D'Halluin do not remedy the deficiencies of Senaratna et al.

Smutny et al. discloses a method for preventing undesired plant growth using compounds containing a sulfonium salt compound. The anion portion of the salt includes inorganic acids, such as non-hydrocarbon substituted aromatic acids. Smutny et al. mentions syringic acid as a type of non-hydrocarbon substituted aromatic acid. At column 5, lines 19-30, Smutny et al. discloses that the sulfonium salt compounds act as herbicides. The compounds are stated to be more toxic toward grasses and other narrow-leaved plants than toward broad-leaved plants, and to be nearly inert and non-toxic toward such broad-leaved plants as legumes and cole crops. Smutny et al. also mentions that compositions of the compounds can contain the compositions alone or may additionally contain other biologically active substances, including other plant growth regulators, such as naphthaleneacetic acid or 2,4-dichlorophenoxyacetic acid.

D'Halliun discloses a method for integrating a DNA fragment into the genome of a monocotyledonous plant cell. The inventors discovered that incubation of plant calli, particularly corn calli, on a cultivation medium comprising plant phenolic compounds, for about five days, greatly stimulated cell division, yielding calli with enhanced competence for

integration into the genome of foreign DNA transferred into the cell by Agrobacterium mediated transformation.

There is no disclosure or suggestion in Smutny et al. that the sulfonium salt compounds disclosed therein could have safener effects, or could be applied as safeners. D'Halliun relates to a different scientific field than the presently claimed methods. D'Halluin clearly relates to the production of genetically modified plants, and not methods for selectively protecting crop plants by applying compounds of formula (I) together with herbicides on plants. Persons skilled in the art would therefore not be motivated to combine the teachings of Smutny et al. and D'Halliun with the compounds of Senaratna et al., or have a reasonable expectation of success for achieving similar safening effects.

Even if, assuming *arguendo*, a *prima facie* case of obviousness can be established using Senaratna et al., Smutny et al. and D'Halluin, the compounds of formula I of the present claims show unexpected properties in comparison to the compounds exemplified in Senaratna et al., which clearly overcomes or rebuts any assertion that the claimed herbicidal compositions are *prima facie* obvious.

Applicants respectfully submit that a *prima facie* case of obviousness has not been established, and that the present rejection is improper and should be withdrawn. Claims 4, 5, 7, 10-12, 21-25 and 27-37 are not obvious in view of Senaratna et al., Smutny et al., and D'Halluin. Withdrawal of this section 103 rejection is respectfully requested.

In view of the above, the present application is believed to be in a condition ready for allowance. Reconsideration of the application is respectfully requested and an early Notice of Allowance is respectfully requested.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this

application by this firm) to our Deposit Account No. 03-2775, under Order No. 09879-00043-US. A duplicate copy of this paper is enclosed.

Dated: March 15, 2010

Respectfully submitted,

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